

CLAIMS

1 1. An endocrine cell microdisk comprising a discoid microporous
2 encapsulated endocrine cell for transplantation into an animal body to
3 correct a hormonal deficiency.

4 2. An endocrine cell microdisk according to Claim 1 in which the
5 endocrine cell is an insulin producing cell.

6 3. An endocrine cell microdisk according to claim 1 in which said
7 disk has a ratio of diameter to thickness of at least four.

8 4. An endocrine cell microdisk according to claim 1 in which said
9 disk has a ratio of diameter to thickness of in the range of from six to
10 twenty.

11 5. An endocrine cell microdisk according to claim 1 in which said
12 disk has at least one concave face.

13 6. An endocrine cell microdisk according to claim 1 in which said
14 disk has two opposed concave faces.

15 7. An endocrine cell microdisk according to claim 6 in which the
16 concavities are maintained by internal joining structure.

17 8. An endocrine cell microdisk according to claim 7 in which said
18 joining structure extends between opposing faces of said disk.

19 9. A flattened macrochamber with one or more surface concavities
20 in which the endocrine cells are contained in a microporous membrane.

21 10. A flattened macrochamber as in claim 8 in which said concavities
22 are maintained by internal joining structure.

23 11. An endocrine cell microdisk comprising a microporous mem-
24 brane having first and second opposed faces joined together at the
25 periphery thereof and forming an extended flattened structure of lateral
26 extent substantially greater than the maximum thickness between the
27 surfaces and containing endocrine cellular material for implantation as a
28 unit into an animal body.

29 12. An endocrine cell microdisk according to claim 11 in which said
30 lateral extent is at least four times said thickness.

31 13. An endocrine cell microdisk according to claim 11 in which said
32 microdisk is formed generally in the shape of an erythrocyte.

33 14. An endocrine cell microdisk according to claim 11 which includes
34 means for maintaining at least one concavity in a lateral surface of said
35 disk.

36 15. An endocrine cell microdisk according to claim 11 which includes
37 at least one tab extending between said opposed faces and maintaining a
38 concavity in at least one of said faces.

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16. An endocrine cell microdisk according to claim 15 which includes a plurality of tabs extending between said opposed faces and maintaining a plurality of concavities in at least one of said faces.

UNITED STATES DEPARTMENT OF AGRICULTURE